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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/810,422	03/26/2004	Patrick R. Buckley	IL-11255	8937
Eddie E. Scott Assistant Laboratory Counsel Lawrence Livermore National Laboratory P.O. Box 808, L-703 Livermore, CA 94551				
			EXAMINER SHEEHAN, JOHN P	
			ART UNIT 1793	PAPER NUMBER
			MAIL DATE 04/29/2008	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/810,422

Applicant(s)

BUCKLEY ET AL.

Examiner

John P. Sheehan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 January 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-93 is/are pending in the application.
- 4a) Of the above claim(s) 2-8, 10-19, 21-2425, 27-49, 51-60 and 62-93 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 9, 20, 26, 50 and 61 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-849)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 3/26/2004
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Species V in the reply filed on January 24, 2008 is acknowledged. In response to the Election/Restriction applicants have elected species V, a shape memory material body comprising a Ni-Zn-Fe-O powder as recited in claim 9. Applicants also identified claims 1, 9, 12, 13, 14, 15, 16, 20, 23, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 50, 53, 54, 55, 56, 57, 61, 64, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 86, 87, 88, 89, 90, 91, 92 and 93 as readable on the elected species. The Examiner has identified only claim 1 as a generic claim. Claims 12, 13, 14, 15, 16, 23, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 53, 54, 55, 56, 57, 64, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 86, 87, 88, 89, 90, 91, 92 and 93 do not recite a shape memory material body comprising a Ni-Zn-Fe-O powder and therefore are not readable on the elected species which is a shape memory material body comprising a Ni-Zn-Fe-O powder as recited in claim 9. Only claims 9, 20, 26, 50 and 61 read on a shape memory material body comprising a Ni-Zn-Fe-O powder. Accordingly, claims 9, 20, 26, 50 and 61 in addition to generic claim 1 have been examined.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 9, 20, 26, 50 and 61 are rejected under 35 U.S.C. 103(a) as being unpatentable over Muller-Schulte (US Patent Application Publication No. 2005/0175702, cited by the Examiner) in view of The Condensed Chemical Dictionary (cited by the Examiner) and McCurrie (cited in the IDS submitted March 26, 2004).

Muller-Schulte teaches a shape memory material comprising a shape memory polymer and magnetic powder (paragraphs 0030 and 0031) dispersed in the shape memory polymer. Muller Schulte teaches that the magnetic powder can be various ferrites, including an iron ferrite containing M wherein M can be a mixture of two bivalent metal ions (paragraphs 0036 to 0039, particularly the last 2 lines of paragraph 0039).

The Condensed Chemical Dictionary teaches that Ni and Zn have valences of 2, that is, Ni and Zn are bivalent and are thus encompassed by M as defined by Muller-Schulte (paragraph 0039, the last 2 lines).

McCurrie teaches that Ni-Zn ferrite (Ni-Zn-Fe-O) is a well known ferrite (Table 1.1).

The claims and Muller-Schulte differ in that Muller-Schulte does not expressly teach the use of a Ni-Zn-Fe-O magnetic powder in the disclosed shape memory material.

However one of ordinary skill in the art at the time the invention was made would have considered the invention to have been obvious because Muller-Schulte discloses that iron ferrites containing 2 bivalent metals can be used in Muller-Schulte's invention and because Zn and Ni are bivalent metals Muller-Schulte's disclosure is considered to encompass Ni-Zn-Fe-O ferrites which as evidenced by McCurrie are well known.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John P. Sheehan whose telephone number is (571) 272-1249. The examiner can normally be reached on T-F (7:30-5:00) Second Monday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

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USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/John P. Sheehan/
Primary Examiner
Art Unit 1793

JPS